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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Michel Oswald Gorgerin

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EXAMINER

JACOBSON, MICHELE LYNN

ART UNIT

PAPER NUMBER

1794

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/522,147	Applicant(s) GORGERIN, MICHEL OSWALD	
	Examiner MICHELE JACOBSON	Art Unit 1794	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Coutant et al. U.S. Patent No. 5,380,803(hereafter referred to as Coutant).

3. Coutant teaches a polyethylene blend with improved physical and optical properties that can be used to make bottles. (Col. 2, lines 6, 22, 26) The resin recited is multimodal and produced by blending between 10-80 % weight of a low molecular weight polymer with 20-90 % weight of a high molecular weight copolymer. It is recited that "it is preferred, if the composition of matter comprising the ethylene homopolymer resin and the ethylene copolymer resin, is essentially free of any other ethylene polymers." (Col. 6, lines 31-35) The low molecular weight component is recited to be an ethylene homopolymer and the high molecular weight component a copolymer of ethylene and from 0.01-15 weight percent 1-butene. (Col. 5, lines 24 and 32) It is recited that "it is preferred, if the composition of matter comprising the ethylene homopolymer resin and the ethylene copolymer resin, is essentially free of any other

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ethylene polymers.” (Col. 6, lines 31-35) Other limitations set forth by Coutant can be found in the following table.

4. The limitations of claims 1, 3-5, and 8-14 are addressed in the following table.

The ranges of Coutant encompass or are sufficiently specific to obviate the limitations set forth in all of these claims. (See MPEP 2144.05)

	Density (g/cm ³)	MI ₂	Mw/Mn	MI ₂ (A)/MI ₂	% Ethylene Homopolymer (A)	% Copolymer (B)
Applicant Polyethylene	0.950-0.962	1-3 g/10 min	5-9	5-500	30-40 % weight	35-80 % weight
Coutant Polyethylene	0.945-0.965	0.1-5 g/10 min	3-15	5-250 and above	10-80 % weight	20-90 % weight
Applicant Ethylene Homopolymer (A)	> 0.965	> or = 10 g/10 min				
Coutant Ethylene Homopolymer	0.96-0.98	> or = 25 g/10 min				
Applicant Copolymer (B)		0.08-0.8 g/10 min				
Coutant Copolymer		> 0.05 g/10 min				

5. It would have been obvious to one of ordinary skill in the art to have optimized the parameters set forth in Coutant in order to produce the invention as claimed in claims 1-18.

6. MPEP 2144.05 recites “In the case where the claimed ranges “overlap or lie inside ranges disclosed by the prior art” a prima facie case of obviousness exists.”

Coutant either encompasses or overlaps the ranges set forth by applicant, therefore

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rendering applicant's invention as claimed in claims 1-5 and 7-17 obvious to one of ordinary skill in the art.

7. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have produced a bottle of less than 2 L volume as claimed in claim 6 since bottles of 2 L volume and below are universally known and the most desirable size for drink packaging.

8. Although the limitation of 2 reactors connected in series as set forth in claim 16 is a product by process limitation, nonetheless, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used whatever suitable polymerization process was necessary to produce the polymer, including utilizing 2 reactors.

9. Sterilizing the bottle as claimed in claim 18 would have been obvious to one of ordinary skill in the art at the time the invention was made since all bottles need to be sterilized before they can be filled with beverages for consumers.

10. Coutant does not specifically recite a bottle in an example with the same parameters as applicant. However, the resistance to slow cracking recited in the examples of Coutant are all at least 60 hrs, indicating a motivation to have increased resistance to slow cracking. Coutant does not recite Vicat points for the polymers produced, but the examiner believes this property would be inherent to the synthesis parameters set forth in claim 1. It would have been obvious to combine polymers A and B within the parameters set forth in Coutant to produce a bottle with the same characteristics as claimed in claim 2.

Response to Arguments

1. Applicant's amendment of claim 1 to add the limitation of a sterilized bottle is sufficient to overcome the 102(b) rejection of claims 1-5 and 7-17 set forth in the previous office action. The rejection is therefore withdrawn.

2. Applicant's arguments filed 2/6/08 regarding the rejections under 103(a) of claims 1-18 have been fully considered but they are not persuasive. Applicant states on page 5 of the remarks that resin of higher densities are desirable in bottles that have to be sterilized and that the claimed resin has densities that can be increased without a reduction in stress cracking resistance. Applicant further states on page 6 that support for this determination can be found in the experimental data presented in the specification. Applicant contends that there is no suggestion in Coutant that these benefits to the stress crack resistance could be obtained with the bottles recited in Coutant. However, applicant has failed to provide data comparing their invention to the closest analogous art (i.e. Coutant) to provide proof that bottle produced with the parameters recited by Coutant would not inherently display the same characteristics recited by applicant since both applicant and Coutant recite densities and all of the examples recited by Coutant have a resistance to slow cracking greater than 60 hrs as recited by applicant.

3. Applicant states on page 6 of the remarks that Coutant is primarily concerned with improving the optical properties and processability of the polymers recited and that there is nothing in Coutant to suggest that the bottles disclosed would be suitable for

sterilization. Applicant further contends on page 6 of the remarks that upon reading the disclosure of Coutant one skilled in the art would not have realized that bottles produced with the composition recited could be sterilized at high temperatures and would have superior crack resistance. Applicant's arguments with respect to high temperature sterilization are not germane since this limitation is not set forth in any of the claims. With regards to superior crack resistance, the examples of Coutant all recite crack resistance values greater than the limitation set forth by applicant and therefore one of ordinary skill would have immediately recognized that bottles produced from the composition of Coutant would have superior crack resistance.

4. Regarding applicant's assertion that it would not occur to one of ordinary skill in the bottling art to sterilize the bottles recited by Coutant, the examiner respectfully disagrees. It is universally known in the beverage bottling art that bottles must be sterilized before being filled with liquids meant for consumption by consumers. It would have been obvious to one having ordinary skill in the art at the time the invention was made to try sterilizing the bottles recited by Coutant so that they could be used for beverage bottling in order to harness their superior crack resistance properties as recited by Coutant. The examiner notes that the process of sterilization need not occur only at high temperatures. Irradiation with UV light and chemical sterilization may both be carried out at room temperature. Since the limitations set forth in claim 1 only require that the bottle be sterilized, one of ordinary skill in the art would not have needed to recognize that the bottle could be sterilized at high temperatures as applicant contends. Furthermore, it is the examiner's opinion that since Coutant recites the same

composition as applicant, the bottles produced by Coutant would be able to withstand sterilization at high temperatures, even if this is not an explicitly recognized property. Recognition of undisclosed features inherent in the prior art does not constitute patentable subject matter.

Conclusion

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHELE JACOBSON whose telephone number is (571)272-8905. The examiner can normally be reached on Monday-Thursday 8:30 AM-7 PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on (571) 272-1284. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Michele L. Jacobson
Examiner /M. J./
Art Unit 1794

/Carol Chaney/
Supervisory Patent Examiner, Art Unit 1794